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CLAIMS

1. A recording method for:

carrying out data compression on time-series
information;

recording said time-series information completing
said data compression onto a recording medium;

adding management information for a
decoding/reproduction process to data included in each of
decoding/reproduction units of said time-series
information completing said data compression; and

recording said management information onto said
recording medium,

whereby additional information for data included in
each of predetermined-interval decoding/reproduction
units is recorded onto said recording medium by being
associated with said management information for said
decoding/reproduction process for data of a corresponding
one of said decoding/reproduction units where said
predetermined-interval decoding/reproduction units are
some of said decoding/reproduction units separated from
each other by predetermined time intervals.

2. The recording method according to claim 1
wherein,

data of a read/write unit serving as a unit, in

which data is written onto said recording medium and read out from said recording medium, includes a plurality of said decoding/reproduction units of said time-series information; and

the sequence of pieces of data included in said decoding/reproduction units pertaining to said read/write unit in a time-series direction is changed.

3. (Amended) The recording method according to claim 1 wherein said management information added to data of said decoding/reproduction unit as management information for said decoding/reproduction process is time management information on a reproduction/output timing of said data.

4. The recording method according to claim 2 whereby additional information for data of said predetermined-interval decoding/reproduction unit is recorded by placing management information for a decoding/reproduction process for data of a corresponding one of said decoding/reproduction units at a predetermined location in data of said read/write unit.

5. The recording method according to claim 2 wherein:

data of said read/write unit comprises a plurality of packets; and

additional information for data of said predetermined-interval decoding/reproduction unit is recorded in data of said read/write unit as a packet including management information for a decoding/reproduction process for data of a corresponding one of said decoding/reproduction units.

6. The recording method according to claim 2 wherein:

data of said read/write unit comprises a plurality of packets;

a specific packet is selected among said packets of said time-series information completing said data compression; and

additional information for data of said predetermined-interval decoding/reproduction unit is recorded at a location determined as a location relative to said specific packet including management information for a decoding/reproduction process for a corresponding one of said decoding/reproduction units.

7. (Amended) The recording method according to claim 1 wherein said additional information includes at least information on a time at which data of said decoding/reproduction unit of said time-series information is acquired.

8. (Amended) A recording method according to claim 1 wherein said additional information includes information on a condition in which data of said decoding/reproduction unit of said time-series information is acquired.

9. (Amended) The recording method according to claim 1 wherein;

 said time-series information is video information;
 data of said decoding/reproduction unit is information of a field unit or a frame unit; and
 said data compression uses a correlation with data of said decoding/reproduction unit.

10. A recording apparatus comprising:
 data compression means for carrying out data compression on time-series information;
 management-information generation means for generating management information for a decoding/reproduction process and adding said management information to data included in each of decoding/reproduction units of said time-series information completing said data compression;
 additional-information generation means for generating additional information for data included in each of predetermined-interval decoding/reproduction

units, which are some of said decoding/reproduction units separated from each other by predetermined time intervals; and

recording control means for:

recording said time-series information completing said data compression on a recording medium by adding said management information generated by said management-information generation means as management information for a decoding/reproduction process to data of said decoding/reproduction unit; and

recording said additional information generated by said additional-information generation means on said recording medium by associating said additional information with management information generated by said management-information generation means as management information for said decoding/reproduction process for data of a corresponding one of said decoding/reproduction units.

11. The recording apparatus according to claim 10 wherein,

 said recording control means generates data including a plurality of said decoding/reproduction units of said time-series information as data of a read/write unit serving as a unit, in which data is written onto

said recording medium and read out from said recording medium; and

the sequence of pieces of data included in said decoding/reproduction units pertaining to said read/write unit in a time-series direction is changed.

12. (Amended) The recording apparatus according to claim 10 wherein said management information added to data of said decoding/reproduction unit as management information for said decoding/reproduction process is time management information on a reproduction/output timing of said data.

13. The recording apparatus according to claim 11 wherein said recording control means records additional information for data of said predetermined-interval decoding/reproduction unit by placing management information for a decoding/reproduction process for data of a corresponding one of said decoding/reproduction units at a predetermined location in data of said read/write unit.

14. The recording apparatus according to claim 11 wherein:

data of said read/write unit comprises a plurality of packets; and

said recording control means records additional

information for data of said predetermined-interval decoding/reproduction unit in data of said read/write unit as a packet including management information for a decoding/reproduction process for data of a corresponding one of said decoding/reproduction units.

15. The recording apparatus according to claim 11 wherein:

data of said read/write unit comprises a plurality of packets;

a specific packet is selected among said packets of said time-series information completing said data compression; and

said recording control means records additional information for data of said predetermined-interval decoding/reproduction unit at a location determined as a location relative to said specific packet including management information for a decoding/reproduction process for a corresponding one of said decoding/reproduction units.

16. (Amended) The recording apparatus according to claim 10 wherein said additional information includes at least information on a time at which data of said decoding/reproduction unit of said time-series information is acquired.

17. (Amended) The recording apparatus according to claim 10 wherein said additional information includes information on a condition in which data of said decoding/reproduction unit of said time-series information is acquired.

18. (Amended) The recording apparatus according to claim 10 wherein;

 said time-series information is video information;
 data of said decoding/reproduction unit is information of a field unit or a frame unit; and
 said data compression uses a correlation with data of said decoding/reproduction unit.

19. A recording medium for:
 recording time-series information completing data compression;

 recording management information by adding said management information for a decoding/reproduction process to data included in each of decoding/reproduction units of said time-series information completing said data compression; and

 recording additional information for data included in each of predetermined-interval decoding/reproduction units by associating said additional information with management information for said decoding/reproduction

process for data of a corresponding one of said decoding/reproduction units where said predetermined-interval decoding/reproduction units are some of said decoding/reproduction units separated from each other by predetermined time intervals.

20. The recording medium according to claim 19 wherein,

data of a read/write unit serving as a unit, in which data is written onto said recording medium and read out from said recording medium, includes a plurality of said decoding/reproduction units of said time-series information; and

the sequence of pieces of data included in said decoding/reproduction units pertaining to said read/write unit in a time-series direction is changed.

21. (Amended) The recording medium according to claim 19 wherein said management information added to data of said decoding/reproduction unit as management information for said decoding/reproduction process is time management information on a reproduction/output timing of said data.

22. The recording medium according to claim 20 whereby additional information for data of said predetermined-interval decoding/reproduction unit is

recorded by placing management information for a decoding/reproduction process for data of a corresponding one of said decoding/reproduction units at a predetermined location in data of said read/write unit.

23. The recording medium according to claim 20 wherein:

data of said read/write unit comprises a plurality of packets; and

additional information for data of said predetermined-interval decoding/reproduction unit is recorded in data of said read/write unit as a packet including management information for a decoding/reproduction process for data of a corresponding one of said decoding/reproduction units.

24. The recording medium according to claim 20 wherein:

data of said read/write unit comprises a plurality of packets;

a specific packet is selected among said packets of said time-series information completing said data compression; and

additional information for data of said predetermined-interval decoding/reproduction unit is recorded at a location determined as a location relative

to said specific packet including management information for a decoding/reproduction process for a corresponding one of said decoding/reproduction units.

25. (Amended) The recording medium according to claim 19 wherein said additional information includes at least information on a time at which data of said decoding/reproduction unit of said time-series information is acquired.

26. (Amended) The recording medium according to claim 19 wherein said additional information includes information on a condition in which data of said decoding/reproduction unit of said time-series information is acquired.

27. (Amended) The recording medium according to claim 19 wherein;

 said time-series information is video information;
 data of said decoding/reproduction unit is information of a field unit or a frame unit; and
 said data compression uses a correlation with data of said decoding/reproduction unit.

28. (Amended) The reproduction method for a recording medium according to claim 19 whereby:
 data of said decoding/reproduction unit of said time-series information is decompressed to be reproduced

and output by using management information for said decoding/reproduction unit; and

by using management information for said decoding/reproduction process, said additional information is reproduced and output synchronously with an operation to reproduce and output data of a corresponding one of said decoding/reproduction units of said time-series information.

29. (Amended) The reproduction method for a recording medium according to claim 19 whereby:

data of said decoding/reproduction unit of said time-series information is decompressed to be reproduced and output by using management information for said decoding/reproduction unit; and

by using management information for said decoding/reproduction process, said additional information is reproduced synchronously with an operation to reproduce and output data of a corresponding one of said decoding/reproduction units of said time-series information, and said reproduced additional information is used for controlling data of a corresponding one of said decoding/reproduction units.

30. (Amended) The reproduction apparatus for a recording medium according to claim 19, said reproduction

apparatus comprising:

read means for reading out said compressed time-series information and said additional information from said recording medium;

separation means for separating said compressed time-series information and said additional information, which have been read out by said read means;

decompression means for decompressing said compressed time-series information separated by said separation means;

first reproduction/output means for reproducing and outputting said decompressed time-series information by using management information for said decoding/reproduction process; and

second reproduction/output means for reproducing and outputting said additional information output by said separation means synchronously with an operation to reproduce and output data of said decoding/reproduction unit of said time-series information by using management information for said decoding/reproduction process.

31. (Amended) The reproduction apparatus for a recording medium according to claim 19, said reproduction apparatus comprising:

read means for reading out said compressed time-

series information and said additional information from said recording medium;

separation means for separating said compressed time-series information and said additional information, which have been read out by said read means;

decompression means for decompressing said compressed time-series information separated by said separation means;

reproduction/output means for reproducing and outputting said decompressed time-series information by using management information for said decoding/reproduction process; and

reproduction/control means for reproducing said additional information output by said separation means in synchronization with an operation to reproduce and output data of said decoding/reproduction unit of said time-series information by using management information for said decoding/reproduction process, and controlling data of a corresponding one of said decoding/reproduction units on the basis of said generated additional information.

32. An image pickup apparatus comprising:

image pickup device;

image pickup optical system for forming an object

image on said image pickup device;

data compression means for carrying out a data compression process on video information output by said image pickup device;

time-management information generation means for generating time-management information for a decoding/reproduction process and adding said time-management information to data included in each of decoding/reproduction units of said video information compressed by said data compression means ;

additional-information generation means for generating additional information for data included in each of predetermined-interval decoding/reproduction units, which are some of said decoding/reproduction units separated from each other by predetermined time intervals; and

recording control means for:

recording said video information completing said data compression on a recording medium by adding said management information generated by said management information generation means as management information for a decoding/reproduction process to data of said decoding/reproduction unit; and

recording said additional information generated by

said additional-information generation means on said recording medium by associating said additional information with management information generated by said management information generation means as management information for said decoding/reproduction process for data of a corresponding one of said decoding/reproduction units.

 33. The image pickup apparatus according to claim 32 wherein,

 said recording control means generates data including a plurality of said decoding/reproduction units of said video information as data of a read/write unit serving as a unit, in which data is written onto said recording medium and read out from said recording medium; and

 the sequence of pieces of data included in said decoding/reproduction units pertaining to said read/write unit in a time-series direction is changed.

 34. The image pickup apparatus according to claim 32 wherein said recording control means records additional information for data of said predetermined-interval decoding/reproduction unit by placing management information for a decoding/reproduction process for data of a corresponding one of said decoding/reproduction

units at a predetermined location in data of said read/write unit.

35. The image pickup apparatus according to claim 32 wherein:

data of said read/write unit comprises a plurality of packets; and

said recording control means records additional information for data of said predetermined-interval decoding/reproduction unit in data of said read/write unit as a packet including management information for a decoding/reproduction process for data of a corresponding one of said decoding/reproduction units.

36. The image pickup apparatus according to claim 32 wherein:

data of said read/write unit comprises a plurality of packets;

a specific packet is selected among said packets of said compressed time-series information; and

said recording control means records additional information for data of said predetermined-interval decoding/reproduction unit at a location determined as a location relative to said specific packet including management information for a decoding/reproduction process for a corresponding one of said

decoding/reproduction units.

37. The image pickup apparatus according to claim 32 wherein said additional information includes at least information on a time at which data of said decoding/reproduction unit of said video information is acquired.

38. The image pickup apparatus according to claim 32 wherein said additional information includes at least information on a condition in which data of said decoding/reproduction unit of said time-series information is acquired.

39. The image pickup apparatus according to claim 32 wherein;

data of said decoding/reproduction unit is information of a field unit or a frame unit; and said data compression process uses a correlation with data of said decoding/reproduction unit.